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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,791	10/30/2003	Akihiro Tanaka	244692US2	8912
22850	7590	10/04/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			LEE, PATRICK J	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No.	Applicant(s)	
	10/695,791	TANAKA ET AL.	
	Examiner	Art Unit	
	Patrick J. Lee	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,8-16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 8-11 is/are allowed.
- 6) ☒ Claim(s) 12-16 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0805, 0505, 0405</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to amendment filed August 15th, 2005.

Drawings

2. The drawings were received on 8/15/2005. These drawings are acceptable.

Specification

3. The amended title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. "Optical Encoder" is a general term that does not disclose any portion of the inventive aspect of the device.

Information Disclosure Statement

4. The information disclosure statement filed April 22nd, 2005 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because Document No. 60-515 lacks an English translation. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 12-13, 16, 18, & 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by US 2003/00467673 A1 to Thorburn et al.

With respect to claim 12, Thorburn et al disclose a photodetector array comprising: photodiodes (D_1) as a plurality of first photodiodes arranged in a first direction; and photodiodes (D_0) as a plurality of second photodiodes commonly connected to a same wiring and arranged alongside photodiodes (D_1), such that photodiodes (D_0) are located in between first photodiodes (D_1). Thorburn et al disclose only photodiodes (D_0) being only connected to pad (P_0) (see page 3, paragraph [0042]). A circuit to perform calculation based on photodiodes (D_0 , D_1) is inherent to the device.

With respect to claim 13, Thorburn et al disclose every fourth photodiode (D_1) connected to the same common wiring.

With respect to claim 16, Thorburn et al disclose a photodetector array comprising: photodiodes (D_1) as a plurality of first photodiodes arranged in a first direction; and photodiodes (D_0) as a plurality of second photodiodes commonly connected to a same wiring and arranged alongside photodiodes (D_1), such that

photodiodes (D₀) are located in between first photodiodes (D₁). Thorburn et al disclose only photodiodes (D₀) being only connected to pad (P₀) (see page 3, paragraph [0042]). A circuit to perform calculation based on photodiodes (D₀, D₁) is inherent to the device.

With respect to claim 18, Thorburn et al disclose every fourth photodiode (D₁) connected to the same common wiring.

With respect to claims 21-22, Thorburn et al disclose the first and second photodiodes (D₀, D₁) to be in the shape of a rectangle extending in a second direction perpendicular to a first direction (see Figure 4).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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9. Claims 14-15 & 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/00467673 A1 to Thorburn et al.

With respect to claims 14-15 & 19-20, the invention by Thorburn et al is disclosed in the discussion of claims above. However, Thorburn does not explicitly disclose the calculations as claimed; such would have been obvious to one of ordinary skill in the art in order to allow the device to process the detected signals for a determination as to the quality of the detected signals.

Allowable Subject Matter

10. Claims 1-2 & 8-11 are allowable over the prior art.

11. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 1, the prior art of record does not disclose nor suggest the first optical detector having a changing output, while the second optical detector having a constant output. As a result, claim 1 and dependent claims 2 & 8-11 are allowable over the prior art.

Response to Arguments

12. Applicant's arguments with respect to claims 1-2, 8-16, & 18-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (571) 272-2440. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J. Lee
Examiner
Art Unit 2878

PJL
September 19th, 2005



Stephone B. Allen
Primary Examiner